2019 Annual Report
How It All Began

On May 20, 1862, the Homestead Act accelerated the settlement of the western territory of the United States by granting any adult citizen a claim of 160 acres of surveyed public land. Claimants were required to “improve” the plot by building a dwelling and cultivating the land. After 5 years on the land, the original filer was entitled to the property, free and clear, except for a small registration fee. The Homestead Act led to a massive influx of new and inexperienced farmers across the Great Plains, greatly increasing the acreage under cultivation.

At this point in time, the Great Plains had been covered by miles upon miles of prairie grass. But widespread conversion of the land by deep plowing and other methods ended up eliminating the native grasses which held the soil in place and helped retain moisture during dry periods.

In 1917, the United States entered World War I, creating a huge demand for wheat. Farmers began to push their fields to their limit, plowing under more and more grassland with the newly invented tractor, which chewed up huge amounts of land at unheard of rates.

Then, in 1931, a severe drought hit the mid-west and southern plains states. This drought is the worst ever in United States history, covering more than 75 percent of the country and affecting 27 states severely. As the crops died, the “black blizzards” began. Dust from the over-plowed and over-grazed land began to blow.

On May 11th, 1934, a massive dust storm two miles high sent millions of tons of topsoil flying toward the East Coast, right over the top of Washington, D.C. and 300 miles out into the Atlantic Ocean. This prompted Congress to declare soil erosion “a national menace” and as a result, both the Soil Conservation Act and Soil Conservation Service (SCS) were created. This new federal agency (now called the Natural Resources Conservation Service or NRCS) developed extensive conservation programs to retain topsoil and prevent further irreparable damage to the land.

But by 1936, the damage had been done. Eight hundred and fifty million tons of topsoil had been blown off the southern plains. Soil conservation laws were enacted in 1937 that allowed farmers to set up their own local conservation districts (now called Resource Conservation Districts). These RCDs were controlled by local boards of directors and empowered to manage soil and water resources for the purpose of conservation. Until the formation of these RCDs, farmers and ranchers often had no way of reaching SCS scientists for soil and water information and guidance. The RCD program recognized that new farming science and technology needed to be tested, accepted, and enforced by the farmers working the land, rather than bureaucrats in Washington. ■
The devastation caused by 2018’s Camp Fire in Paradise, California was a slap-in-the-face wake-up call for Nevada County residents. The similarities between the community of Paradise and Nevada County are frightening: steep terrain, heavy fuel loads, periodic high winds, light flashy fuels, and poor ingress and egress. In response, the Nevada County Resource Conservation District (RCD) worked together with other organizations and government agencies to educate the public on the reasons why the Camp Fire happened and what the community could do to better our chances of avoiding a similar fate. A few of the RCD’s efforts are listed here.

**“PONDEROSA WEST” AND AIR CURTAIN BURNER**

RCD staff met with Fire Safe Council of Nevada County (FSC), CAL FIRE, and the Nevada County Office of Emergency Services (OES) to discuss partnering on the Ponderosa West Grass Valley Defense Zone project. One of the fundamental tenets of the RCD is that green waste or “biofuels” must be removed from a site to be beneficial. Changing the shape of the green waste and putting it back on the ground does not improve the situation. RCD staff presented the idea of placing an air curtain incinerator (ACI) on the project site to remove the wood, slash, brush, and other green waste that would be generated from clearing and thinning. Two of the benefits of an ACI are that (1) the fire is contained in a metal “box” and (2) the fire burns so hot that the burning green waste puts out almost no emissions (smoke and other pollutants). The material is reduced to fine bio-ash which can be used in compost or simply spread out on the ground.

We are still working with OES and CAL FIRE (owners of the ACI) to find a suitable location for the unit and the logistics of getting the green waste to the ACI. Other complications include: possible CEQA/NEPA permits, avoiding areas of critical & environmental concern (ACEC), and contacting landowners in the designated project area.

**RIO BRAVO ROCKLIN BIOMASS PLANT TOUR**

Prior to the 1930s, our forests used to burn often; around four times a century in the higher elevations and about every 7 to 15 years here in the lower elevations. Repeated, mostly low-intensity fires kept our forests thinned of too many trees while reducing ground fuels and ladder fuels. But by 1935, the U.S. Forest Service’s fire management policy stipulated that all wildfires were a danger that needed to be suppressed. Any form of wildland fire, whether it was naturally caused or a “control burn”, was quickly suppressed for fear it would grow uncontrollable and devastating. Thus, the use of “control burns”, or prescribed fire, was banished and became a rarely-used tool for fuels reduction management and forest restoration.

The newly formed Yuba Bear Burn Cooperative is an informal group of landowners, fire professionals, and nonprofit organizations working to bring back the safe use of ecologically-sound prescribed fire on private lands in Nevada County. Prescribed fire allows land managers to restore fire to controlled areas under safe conditions, which can significantly mitigate the effects of a future wildfire.

To learn the details of this program, go to: https://www.mysierrawoods.org/wp-content/uploads/2018/12/FBTI-Instructions_FINAL.pdf

**YUBA BEAR BURN COOPERATIVE**

For more information about the Yuba Bear Burn Cooperative, please contact Jamie Ervin at jamie@sierraforestlegacy.org.
WILDER THAN WILD
Fire, Forests, and the Future

A film by KEVIN WHITE and STEPHEN MOST
www.wilderthanwildfilm.org © 2018 Filmmakers Collaborative SF

FREE Film Screening & Panel Discussion
March 6, Nevada Theatre, 5:15pm-8:00pm
TICKETS @ Eventbrite: http://bit.ly/wilderthanwild
Watch the film on Nevada County Media Channel 18. Live, community-wide, panel coverage will be available on KNCO, KVMR, YubaNet and The Union.
Wilder Than Wild Film Event

The importance of educating the community to the realities of a catastrophic fire event cannot be overstated. Words are great, but as the saying goes, “I hear and I forget, I see and I remember, I do and I understand”. In furtherance of this idea, the RCD presented an interactive event showcasing the documentary film “Wilder than Wild: Fire, Forests, and the Future” (WTW) then concluded with a live panel discussion with local experts regarding potential scenarios and specific questions about wildfire.

Though March 6, 2019 was “a dark and stormy night”, it didn’t keep the 200+ moviegoers from packing the house at the historic Nevada Theatre in downtown Nevada City. We began the event with a short 12-minute film titled, Fire and Forest Health: Your Tahoe National Forest, followed by our main feature film Wilder than Wild. Nevada County Media, YubaNet, The Union, KVMR, and KNCO radio stations all joined forces to ensure that everyone in the community was able to participate in this important event. Both documentaries were simulcast live via Comcast and Suddenlink TV channels and streamed online from Nevada County Digital Media, The Union, and YubaNet’s websites.

The panel discussion afterward was also simulcast on the same media stations with the addition of KNCO and KVMR radio stations. Questions for the panelists came from both the audience in the theatre and folks at home who e-mailed their questions to the event’s MC, Pascale Fusshoeller (YubaNet). Panelists included representatives from Nevada County Office of Emergency Services (OES), Fire Safe Council of Nevada County (FSC), Pacific Gas and Electric Company, CAL FIRE, UC ANR, USFS Tahoe National Forest, and members of our local fire departments.

The event was a huge success and helped kick off the County’s new “Ready Nevada County” program dedicated to reducing fuel loads, increasing the number of homes with defensible space, and better organizing the community in the event of a catastrophe. The RCD is grateful to Joe Flannery (Fire and Forest Health filmmaker) and Kevin White & Stephen Most (Wilder than Wild filmmakers) who gave us special license to broadcast their films via television and internet streaming for this one-night-only event. And a huge “Thank you!” to all of our local partner organizations, agencies, and panelists who volunteered their time for the education and safety of the community. ■

Pascale Fusshoeller, Yubanet.com
Moderator for Wilder than Wild Film Panel Discussion
Q: What can we do about owners/landlords who live out of the area and do not see their overgrown properties for years and who do nothing to clear their property of brush etc.?

A: If you know the people, alert them that the property does not meet current code requirements through a friendly phone call. If you are uncertain who owns the property, you can file a code complaint. The owner will be sent an educational letter noting what they need to do to meet code. Please note, code enforcement is complaint driven. You and your neighbors will need to file many complaints for action to be taken from the state, county, or city.

Q: So far there has been minimal call to action. To succeed at this, all of us must act. What about this?

A: Personal responsibility and working with your community are key to fire preparations. People need to (1) create and maintain fire resistant homes, (2) maintain defensible space for structures and evacuation routes, (3) create evacuation plans and practice, (4) work with your community to create fuel breaks and landscape-wide fuels treatments, (5) lobby for FireWise legislation that acts as both a carrot and a stick to make our communities safer.

Q: 25% of our neighborhood gets the new fire risk... is there anything we can do to make the rest of our road safe? The neighbors at the head of the road don't want their trees and brush cut, but 100+ parcels have to exit through their overgrown corridor. Our road is Casa Loma, but this seems a common problem throughout the community.

A: Form a neighborhood coalition or FireWise community, educate the neighborhood on existing laws and recommendations through conversations and sharing printed materials, write a grant to support people who need special help to meet code, and have a neighborhood work day. If all else fails, town and state actions for code compliance are complaint driven and you can help neighbors submit complaints.

Q: How can a small property owner in the WUI (Wildland Urban Interface) encourage effective fuel reduction at the neighborhood level, beyond one's own property?

A: First, make sure your property meets city/county codes for defensible space and make your home resistant to fire by following the recommendations of the National Fire Protection Association or FireWise USA. Then share how you achieved defensible space and fire-resistant home success with your neighbors. Listen to your neighbors’ concerns regarding wildfire safety.
Q: Should we mandate defensible space standards for those living in the WUI? Should insurance companies mandate?

A: State and local codes mandate defensible space for all structures. New buildings are required to be fire resistant. Older buildings are only legally required to have fire resistant retrofits when renovations require permits. Some people debate if these regulations impinge on private property rights. Others note that in areas with homes built close together (<100 ft from home to property line), that a neighbor’s overgrown vegetation impinges upon their property right to reduce their fire risk.

Q: God forbid we find ourselves trapped in our homes or we’re somewhere in the neighborhood and can’t get out. What is the best thing to do? We live close to a park in Nevada City which has Little Deer Creek running past it and it goes through a culvert. Would a culvert be a good place to hide?

A: It takes a lot of mental and physical fitness to survive an entrapment. Evacuation or avoiding fire weather is always your best chance. If you are caught in the area during a fire, your largest concern should be protecting your lungs from the fire’s radiant heat. You need to seek shelter in an area that protects you from radiant heat like a large open space or a structure. Fire fighters use large safety zones that are at least 4X the projected flame height. New recommended areas may be as large as 8X the projected flame height with 10X for slopes and wind. You can learn more about Safety Zones at The National Wildfire Coordinating Group website: https://www.nwcg.gov/committee/6mfs/safety-zone-research.

Q: What is our county doing to make our roads safer? In particular, to remove fuel from evacuation routes?

A: The County maintains 560 miles of roadway and spends approximately $700,000 per year on roadside brush clearing, tree removal, and mowing. This treats about 70 miles per year. The County and Fire Safe Council applied for and received a grant this year to perform an additional 50 miles of roadside vegetation management which was performed. The County has applied for several FEMA and CAL FIRE wildfire mitigation grants to treat approximately 350 additional miles. The County Board of Supervisors sent a letter to Governor Newsom advocating for CAL TRANS to perform increased roadside vegetation treatment along all state highways located in our County, as well as to increase lane/shoulders where appropriate to reduce potential evacuation bottlenecks.
COMMUNITY OUTREACH

The NCRCD offers all Nevada County high school students the opportunity to participate in our annual Speak-off Contest. Students research an agriculture, conservation, or environmental topic and then put together a creative, informative, 3-minute speech. Speeches are presented to our Board of Directors who score the speakers based on the speech's content, composition, and delivery. First, second, and third place winners take home cash prizes and first place winners are encouraged to advance to the California State Championship competition.

SCHOLARSHIPS

The NCRCD offers scholarships to passionate local students with the intention of becoming future agriculturalists and conservationists, perhaps even bringing their acquired knowledge and experiences back to our community to inform and lead. Our world and society depend on the future of agriculture, and through these scholarships, we hope to inspire and enable students to develop into working lands managers, advocates, and leaders.

SEDIMENT & EROSION CONTROL PLAN (SECP) SELF-CERTIFICATION WORKSHOP

Working in partnership with Placer County RCD, a Sediment & Erosion Control Plan (SECP) self-certification workshop was offered to agriculture producers in both Nevada and Placer counties. Producers who have properties with the potential for soil erosion and sediment discharges into waterways are required by law to complete a SECP. This course covered the Waste Discharge Requirements (WDRs) General Order for Growers within the RWQCB, Region 5.

SEMINARS

The NCRCD offers seminars, workshops, and classes throughout the year on conservation issues that are important to Nevada County and western Sierra County landowners. Our seminars offer information regarding good land stewardship, health and safety, and proper resource management. The topics in 2019 were:

- Working with Natural Fibers (Shan Kendall, Foothill Fibers Guild)
- Birds in Black (Janey Powers)
- Hazardous Fuels Reduction by Livestock (Alana Fowler, The Goat Works)
- Northern California Bats (Corky Quirk, NorCal Bats)
- Beneficial Insects: How to Attract Them to Your Garden (Bonnie Bradt, UC Master Gardeners of Nevada County)
- Irrigated Pasture Management (Dan Macon, UC ANR and NID)

Our partnerships with other organizations demonstrate the common goal we have of educating local property owners to use best management practices to conserve the natural resources of Nevada County.

IRRIGATED PASTURE MANAGEMENT WORKSHOP

Our Irrigated Pasture Management workshop is offered in partnership with the Nevada Irrigation District and the University of California Agriculture and Natural Resources. Dan Macon, UCCE Livestock and Natural Resources Advisor, explains how to maintain your pasture and improve water management and system efficiency. Other topics he explores include estimating soil moisture, commonly planted irrigated pasture forages, water-efficient irrigation methods, grazing management practices, soil biology, and irrigation scheduling.
AVP, TOOL LOAN, & MANURE EXCHANGE PROGRAMS

The Advisory Visit Program (AVP), Manure Exchange, and tool loan programs help connect Nevada County’s farmers, ranchers, gardeners, and landowners with free expert technical assistance and local resources.

Advisory Visit Program: Offers Nevada County landowners personalized assistance with the natural resource management of their property. This program provides general guidance and information in addition to facilitating referrals to other public and private resource professionals at no cost to the landowner. In the past 6 years, we have received over 400 requests for assistance on over 5,500+ acres of land! Resource issues have ranged from erosion control, forestland management, pond maintenance, drainage problems, wildlife habitat improvement, rural road maintenance, and pasture/rangeland management. This program has developed into one of the most important programs the RCD has ever offered.

Manure Exchange Program: Helps connect farmers, gardeners, and landowners who are searching for local sources of manure and compost with livestock owners and managers who have excess fresh and/or composted manure. There are currently 57 manure providers on our list (with locations in both Nevada and Placer counties) supplying our local farmers and gardeners with soil supplements for little or no cost!

Tool Loan Program: The NCRCD offers tools for landowners to borrow – a weed wrench, pond rake, soil sampler, and seed spreader. You won’t use these tools every day but having the ability to use them when you need them makes taking care of your land easier. It takes vigilance and work to keep invasive plants and pests away and maintain your healthy land. Keeping your property healthy and fire resilient truly is a never-ending project.

MULCH MAGIC

It was another successful partnering with Nevada Irrigation District (NID) and the Nevada County Fairgrounds for 2019’s 4th “Mulch Magic” giveaway event! Held at the Nevada County Fairgrounds on Saturday, May 11th, the event began at 7 am with mulch available for free to local residents on a first-come, first-served basis.

In years past, some participants took a long time to load their mulch or had difficulty loading the mulch into their vehicles. This year, in order to keep things moving, Kaycee Strong with NID contacted a local Boy Scout/Eagle Scout troop and asked if they would be willing to help participants load the mulch into their trucks, trailers, etc. They agreed and we ended up with 12 Scouts who helped participants load their mulch. By 8:30 am, all 150 cubic yards of mulch (that had filled most of the Fairgrounds’ center arena) were gone. The help of the Scouts was invaluable and greatly appreciated by the many participants - and the Scouts earned $700 in tips!
ACI/BIOCHAR DEMONSTRATION
Due to the enormous number of dead trees and woody biowaste generated by 2018’s Camp Fire, Butte County added a new tool in their cleanup efforts - it’s called an air curtain incinerator (ACI). The main purpose of an ACI is to quickly eliminate mass amounts of trees and other green waste with little smoke and very few emissions. However, another benefit is that it can produce a byproduct called “biochar”. Biochar is a type of charcoal that can retain moisture and nutrients in the soil (when combined with compost) and sequesters carbon. We attended a demonstration in Durham, CA (along with many other interested groups including USFS and officials from all over the area). We learned how the process works and are researching how we might be able to use it in Nevada County.

CALIFORNIA RANGELAND CONSERVATION COALITION SUMMIT
We attended the Preventing Catastrophic Wildfire in California - The Role for Livestock Grazing Summit in Stockton, CA to learn how other northern California organizations/agencies are dealing with reducing hazardous fuels. Speakers and topics included: Lynn Huntsinger, UC Berkeley - Cattle Grazing to Manage Brush; Van Butsic, UC Berkeley - Fire Risk Increasing Unevenly on Public and Private Lands; Laura Snell, UC ANR Modoc County – Post-Wildfire Grazing on Public Lands; Jeff Stackhouse, UC ANR Humboldt County - Prescribed Fire in CA: Bottlenecks and Opportunities; and Matthew Shapiro, UC ANR Santa Barbara County - Post Wildfire Considerations in Annual Rangelands.

A FIRE RESILIENT CALIFORNIA
The Vision 20/20: A Fire Resilient California 2-day workshop was presented by the University of California, Division of Agriculture and Natural Resources (UC ANR) to provide an opportunity to build connectivity across disciplines to better understand the complexity of, and find solutions to, California’s wildfire problems. The intent was to inform community leaders, policy makers, and others that our wildfire problems aren't just about fire. All hands are needed on-deck to move forward with new emergency response methods, additional considerations for community planning, new public health concerns, policy strategies, and science.

PLAN FOR WATER WORKSHOP
Projections suggest that water supply and demand could reach a critical imbalance in the next 15 years unless new strategies and policies are developed to meet our future water needs. To that end, the Nevada Irrigation District (NID) initiated a community collaboration process called Plan for Water and invited us to attend. The process aims to reach and involve everyone within NID’s district to help guide water resource management efforts into the future. Plan for Water workshops provide information about the process and opportunities to gather input on water priorities from the public. We appreciated the opportunity to attend and to offer our observations and suggestions.

WILDFIRE PREVENTION & PREPAREDNESS TOWN HALL
As fire season is now nearly year-round, we partner with representatives from CAL FIRE, local law enforcement, and city/county officials in offering “Town Hall” meetings where attendees can speak with experts and get the information they need to aid in becoming better prepared for wildfire in our community.
NEVADA COUNTY FAIR 2019

Each year the NCRCD offers natural resource information to the public at the Nevada County Fair. We strive to educate and raise awareness of important local natural resource issues such as: forest health, hazardous fuels reduction, erosion control, invasive species, living with wildlife, the importance of “open space”, and much more. We partner with the Nevada County Farm Bureau where children get to play “farmer for a day” and receive prizes for answering agriculture-related questions geared to teach them that agriculture isn’t just animals, fruits, & vegetables.

CONSERVATION DINNER

January 4, 2019 marked the NCRCD’s 75th Anniversary, and what better way to honor the occasion than by thanking our many volunteers and partners with an afternoon celebration filled with food, music, and good company – all in a beautiful setting (Personeni Ranch/Miller’s Pond).
NEVADA COUNTY AGRICULTURE TOUR

Once again, we teamed-up with the Nevada County Farm Bureau (NCFB) and found a great selection of locations for the 2019 Nevada County Agriculture Tour. Agriculture tours are important for many reasons. With most of the population at least two generations removed from farming, it gives people interested in how their food is produced an opportunity to make connections with local farmers and ranchers. This all-day event featured sites that represent the diversity and beauty of agriculture in Nevada County.

Tickets for the Ag Tour sell out quickly and are available by advance purchase only from the NCFB website. Admission includes comfortable air-conditioned transportation, educational talks at each stop, lunch, and wine tasting. Hope you join us on the 2020 Tour!

2019 Ag Tour stops:
- Larkspur Lavender
- Starbright Acres
- Kramer Ranch
- Robinson Ranch
- Pilot Peak Winery
September 18, 2019, marked Nevada County Ag in the Classroom’s 5th Annual Farm Day at the Nevada County Fairgrounds. Farm Day gives our local 2nd and 3rd graders the opportunity to become familiar with nearly all facets of agriculture and gives them a personal connection with agriculture that is steadily being lost through the years. Farm Day teaches the importance of our rural community lifestyle, the preservation of open space, and learning where our food really comes from.

This was our first wet Farm Day, but everyone took the rain in stride, and a good time was had by all. The Nevada County Ag in the Classroom group is made up of representatives from the following organizations: Nevada County Ag Commissioner’s office, Nevada County Fairgrounds, Nevada County Farm Bureau, NCRCD, Placer Nevada Cattlewomen, Sierra Foothill Research & Extension Center, and Sierra Harvest.

POPOFF RANCH – DRAFT HORSES
PLACER NEVADA CATTLEWOMEN – STORY TIME

FOWLER FAMILY FARM – IRRIGATION RELAY
NEVADA COUNTY AG COMMISSIONER – INSECTS AND WEIGHTS

CALFRESH HEALTHY LIVING – NUTRITION
CA DEPT. OF FOOD & AGRICULTURE – PEST DETECTING DOG

NEVADA COUNTY 4-H – RABBITS
BEAR RIVER FFA – BARREL RACING

SIMPLY COUNTRY – FODDER
FOOTHILL FIBER GUILD – WOOL SPINNING

NORCAL BATS – BATS
SIERRA FOOTHILLS AUDUBON – BIRDS

NEVADA IRRIGATION DISTRICT – WATER FOR AGRICULTURE
FORESTHILL LUMBER – SAWMILL

TRIPLE M RANCH – DAIRY COW
KRAMER RANCH – HERDING DOGS
5th Annual Farm Day

GOLD COUNTRY FLYWHEELERS – SMALL FARM MACHINERY
ANGLE HOMESTEAD – GOATS

NEVADA UNION FFA – TOP TEN COMMODITIES
BIERWAGEN’S DONNER TRAIL FRUIT – APPLE CIDER

NEVADA UNION FFA – PIGS
BEAR RIVER FFA – CATTLE

SIERRA HARVEST – SEED SAVING
A TO Z SUPPLY – BEES

MASTER GARDENERS – WORMS AND SOIL
BEAR YUBA LAND TRUST – SEED BOMBS

NEVADA COUNTY FARM BUREAU – PHOTO BOOTH
NEVADA COUNTY 4-H – SHEEP

Thank you for having Saturday.
I really liked hatching and seeing
the animals this morning. I learned
interesting things about an animal. It was fun!